(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 September 2005 (29.09.2005)

PCT

(10) International Publication Number WO 2005/091134 A3

(51) International Patent Classification⁷:

G06F 9/50

(21) International Application Number:

PCT/EP2005/050896

(22) International Filing Date: 1 March 2005 (01.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

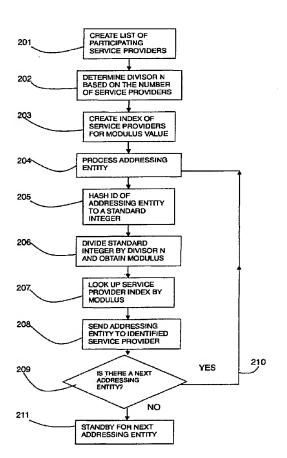
0405595.0 12 March 2004 (12.03.2004) GB

- (71) Applicant (for all designated States except US): INTER-NATIONAL BUSINESS MACHINES CORPORA-TION [US/US]; New Orchard Road, Armonk, New York 10504 (US).
- (71) Applicant (for MG only): IBM UNITED KING-DOM LIMITED [GB/GB]; PO Box 41 North Harbour, Portsmouth Hampshire PO6 3AU (GB).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PIPER, Andrew, Arthur [GB/GB]; 3 White Leaf House, 142 Alexandra Road, Farnborough Hampshire GU14 6RP (GB). WAR-WICK, Malcolm, Michael [GB/GB]; 4 The Old Orangery, Ottershaw Park Mansion, Ottershaw Surrey KT16 0QG (GB). WHYTE, James, Richard, Hamilton [GB/GB]; 38 College Road, Maidenhead Berkshire SL6 6AT (GB).
- (74) Agent: WILLIAMS, Julian, David; IBM United Kingdom Limited, Intellectual Property Law, Hursley Park, Winchester Hampshire SO21 2JN (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR AFFINITY MANAGEMENT



(57) Abstract: A method and system for affinity management in a distributed computer system are provided in which a plurality of addressing entities (311-315) need to be balanced across a plurality of service providers (301-304) whilst maintaining group affinities within the addressing entities. An identifier is provided for each of a plurality of addressing entities, wherein the identifier for each member of a group of addressing entities with an affinity is the same group identifier. A list is provided of service providers which are available to be addressed by an addressing entity to provide an instance of a service. The distribution of addressing entities to service providers is managed by an algorithm. The algorithm includes: applying (205) a hash function to the identifier of an addressing entity to obtain a standard integer; dividing (206) the standard integer by the number of service providers and obtaining the modulus; and selecting (207) a service provider by reference to the modulus. The addressing entity is sent to the instance (306) of the service provided by the selected service provider.

WO 2005/091134 A3



PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 15 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.